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## NOTICE OF ALLOWANCE AND FEE(S) DUE

23552 7590 02/05/2010

MERCHANT & GOULD PC  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER

CHOI, LING SU

ART UNIT

PAPER NUMBER

1796

DATE MAILED: 02/05/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,057	12/04/2006	Bernt-Ake Sultan	15691.0001USWO	1873

TITLE OF INVENTION: CROSSLINKABLE HIGH PRESSURE POLYETHYLENE COMPOSITION, A PROCESS FOR THE PREPARATION THEREOF, A PIPE AND A CABLE PREPARED THEREOF

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/05/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** **Mail** **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
**or Fax** **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23552 7590 02/05/2010  
**MERCHANT & GOULD PC**  
**P.O. BOX 2903**  
**MINNEAPOLIS, MN 55402-0903**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE; address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/570,057 12/04/2006 Bernt-Ake Sulan 15691.0001USWO 1873

**TITLE OF INVENTION: CROSSLINKABLE HIGH PRESSURE POLYETHYLENE COMPOSITION, A PROCESS FOR THE PREPARATION THEREOF, A PIPE AND A CABLE PREPARED THEREOF**

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/05/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOI, LING SIU	1796	526-279000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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23552	7590	02/05/2010	EXAMINER	
CHOI, LING SIU				
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ART UNIT	PAPER NUMBER

1796

DATE MAILED: 02/05/2010

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/570,057

**Applicant(s)**

SULTAN ET AL.

**Examiner**

Ling-Siu Choi

**Art Unit**

1796

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/12/2009.
2. ☒ The allowed claim(s) is/are 1-3, 5-11 and 17-23.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

### **DETAILED ACTION**

1. This Office Action is in response to the Amendment filed 10/12/2009. Claims 12-16 were cancelled and claims 18-23 have been added. Claims 1-11 and 17-23 are now pending.

#### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Mark T. Skoog on January 21, 2010.

3. The application has been amended as follows:

**Cancel claim 4** without prejudice;

Claim 1, line 3, change "0.1 to 10 wt-% and at least one silanol condensation catalyst" to --0.1 to 10 wt%, less than 40 wt% high density polyethylene, and at least one silanol condensation catalyst--;

Claim 17, line 3, change "0.1 to 10 wt-% and at least one silanol condensation catalyst" to --0.1 to 10 wt%, less than 40 wt% high density polyethylene, and at least

one silanol condensation catalyst--;

Claim 19, lines 1-2, change "wherein the composition comprises < 40 wt.-% high density polyethylene; and" to --wherein--.

Claim 22, line 4, change "10 wt.-%" to --10 wt% --;

Claim 22, line 6, change "30 wt.-%" to -- 30 wt% --;

Claim 23, line 4, change "10 wt.-%" to --10 wt% --;

Claim 23, line 6, change "40 wt.-%" to -- 40 wt% --.

***Allowable Subject Matter***

4. Claims 1-3, 5-11 and 17-23 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Borke et al. (US 2005/0049343 A1) and Keogh (US 4,707,520).

Summary of Claim 1:

A <u>pipe</u> made of a crosslinkable polyethylene composition containing	
	a crosslinkable high-pressure ethylene silane copolymer resin having a content of silane of about 0.1 to 10 wt% and
	less than 40 wt% high density polyethylene*, and
	at least one silanol condensation catalyst
wherein <u>the ethylene silane copolymer resin has a density of &gt; 925 kg/m<sup>3</sup>.</u>	

\*supported on page 3, lines 20-23, of Specification.

Summary of Claim 17:

A <u>pipe</u> made of a crosslinkable polyethylene composition comprising	
	an ethylene-vinyltrimethoxysilane copolymer resin having a content of silane of about 0.1 to 10 wt% and
	less than 40 wt% high density polyethylene, and
	at least one silanol condensation catalyst
wherein <u>the ethylene silane copolymer resin has a density of <math>&gt; 925 \text{ kg/m}^3</math></u> .	

Summary of Claim 22:

A <u>pipe</u> made of a crosslinkable polyethylene composition, the composition comprising:	
	a crosslinkable high-pressure ethylene silane copolymer resin having a content of silane of about 0.1 to 10 wt-%;
	at least one silanol condensation catalyst; and
	20-30 wt-% high density polyethylene*;
wherein <u>the ethylene silane copolymer resin has a density of <math>&gt; 925 \text{ kg/m}^3</math></u> ; and the pipe has pressure resistance at 95 °C of at least 4.4 MPa and a failure time of at least 1000 hours.	

\*supported on page 3, lines 24-26, of Specification.

Summary of Claim 23:

A <u>pipe</u> made of a crosslinkable polyethylene composition, the composition comprising:	
	a crosslinkable high-pressure ethylene silane copolymer resin having a content of silane of about 0.1 to 10 wt-%;
	at least one silanol condensation catalyst; and
	< 40 wt-% high density polyethylene;
wherein <u>the ethylene silane copolymer resin has a density of <math>&gt; 925 \text{ kg/m}^3</math></u> ; and the pipe has pressure resistance at 95 °C of at least 4.4 MPa and a failure time of at	

least 1000 hours.

Borke et al. disclose a crosslinkable, flame retardant polyolefin insulation composition having improved abrasion resistance, comprising: (A) 30 to 90 wt% of high density silane-containing polyethylene base resin selected from the group consisting of (a) a blend of a bimodal high density polyethylene resin having a density of 0.940 to 0.960 g/cm<sup>3</sup> with an ethylene-silane copolymer and (b) a bimodal high density polyethylene resin having a density of 0.940 to 0.960 g/cm<sup>3</sup> grafted with a silane monomer; (B) 5 to 70 wt% of flame retardant; and (C) 0.01 to 1 wt% of silanol condensation catalyst, wherein the ethylene-silane copolymer is a copolymer of ethylene with 0.25 to 7.5 wt% vinyltrimethoxysilane or vinyltriethoxysilane and has a melt index of 0.01 to 20 g/10 min (claims 1 and 7). However, Borke et al. do not teach or fairly suggest the claimed pipe, wherein the pipe comprises, in particular, a crosslinkable high-pressure ethylene silane copolymer having a density of > 925 kg/m<sup>3</sup>, less than 40 wt% high density polyethylene, and at least one silanol condensation catalyst.

Keogh discloses a composition comprising (A) a preformed, thermoplastic polymer based on a major proportion of ethylene, the thermoplastic polymer having pendant silane moieties of the formula:  $\text{CH}_2 = \text{CH} - \text{Si}(\text{V})(\text{V})(\text{OR})$ , wherein R is a straight chain C<sub>4-18</sub> hydrocarbon radical or a branched chain hydrocarbon C<sub>3-18</sub> radical; each V is a hydrocarbon C<sub>1-18</sub> radical or an -OR radical; and (B) about 0.1- 5 wt% metal carboxylate as a silanol condensation catalyst, wherein the amount of silane is about



0.05-5 wt% and the polymer has a density of about 0.92- 0.94 g/cm<sup>3</sup> (col. 5, Formula V; col. 6, line 68; col. 7, lines 1-3; claim 1). However, Keogh does not teach or fairly suggest the claimed pipe, wherein the pipe comprises, in particular, a crosslinkable high-pressure ethylene silane copolymer having a density of > 925 kg/m<sup>3</sup>, less than 40 wt% high density polyethylene, and at least one silanol condensation catalyst.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Ling-Siu Choi/

Primary Examiner, Art Unit 1796

January 26, 2010